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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,437	12/19/2001	Yasuhiko Matsuoka	KOJIM 200-D-1	3284

23599 7590 10/16/2003

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EXAMINER

LUK, EMMANUEL S

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 10/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

10/021,437

Applicant(s)

MATSUOKA ET AL.

Examiner

Emmanuel S. Luk

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

Art Unit: 1722

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: The specification should include a statement that it is a divisional of 08/936,553, filed 9/24/97 and is now U.S. Patent No. 6,342,178.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
  1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boneberger et al (5894002).

Boneberger teaches the claimed apparatus having a mold (1,2) having a cavity (12) corresponding to the outer contour of an article to be duplicated, the

Art Unit: 1722

mold being transparent (Col. 6, lines 19-24), means for casting or filling (6) the mold cavity, means for irradiating light (7) from outside the mold.

Boneberger fails to teach a mother mold.

However, the mold halves taught by Boneberger forms the cavity. The mother mold has the same function as a mold if it is not already the same thing with an alternate name. Thus, it would have been obvious to one of ordinary skill in the art to modify Boneberger with mother molds that have the same function in forming a cavity for shaping the outer contour of the desired product.

In regards to claim 9, the wavelength range of 200 to 500 nm is in the visible light spectrum and thus the light source taught by Boneberger would cover the wavelength range claimed.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boneberger (5894002) as applied to claim 6 above, and further in view of Gibson (5093067).

Boneberger fails to teach the mother mold is made from a photo-curable liquid silicone rubber composition.

Gibson teaches materials can be made from liquid silicone rubber, commercially available by Dow Corning that is injected into a mold and cured to form a product. The product can be used including as a mold for forming other products.

It would have been obvious to one of ordinary skill in the art to modify Boneberger with the mold made from liquid silicone rubber as taught by Gibson

Art Unit: 1722

because it allows for the mold to be shaped to the desired shape and thus creating the desired product shape.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boneberger (5894002) as applied to claim 6 above, and further in view of Hayashi et al (4995799).

Boneberger fails to teach agitating and defoaming under reduced pressure.

Hayashi teaches an optical manufacturing apparatus having a gas pressure control mean and defoaming means to defoam the photopolymer (Col. 15, lines 50-57). Thus, the polymer is defoamed under reduced pressure, thereby it would have been obvious to one of ordinary skill in the art to modify Boneberger with gas pressure control mean and defoaming means as taught by Hayashi because it allows for defoaming of the polymer prior to curing.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Su et al, Hoy et al and Martin et al.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel S. Luk whose telephone number is (703) 305-1558. The examiner can normally be reached on Monday through Friday 8 to 4.

Art Unit: 1722

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (703) 308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

E.L.

  
W. L. WALKER  
SUPERVISORY PATENT EXAMINER  
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